

## Tennessee Pollution Prevention Partnership Success Story



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### Saturn Reduces Waste by Creating "Smart Parts"

#### The Member

Saturn Corporation, a General Motors subsidiary, established a highly integrated automotive manufacturing and assembly complex of over seven million square feet in Spring Hill, Tennessee. Approximately 7,000 Saturn team members are involved in producing spaceframe components and body panels, painting vehicles, manufacturing engines and transmissions, auto assembly, warehousing for retailer parts, and ancillary activities. The Saturn Spring Hill facility currently produces small S-Series Saturn sedans, coupes and compact SUVs, sold through a network of approximately 440 dedicated retailers.

#### The Story

Saturn selected polymer plastics as a raw material in making most of the exterior body panels, partially due to their recyclability. When a plastic part is not up to specification, it may be ground up and recycled through off-site vendors into non-automotive plastic goods. Ideally, recycling that plastic back into the same production process or into another car part

component is preferred for both environmental and economic reasons. Saturn worked with suppliers and GM's Design for the Environment team to evaluate processing and reusing GTX-type plastic back into GM wheel covers and caps.

#### The Success

To study GTX plastic reuse, the wheel and cap supplier conducted a processing evaluation. Next, testing was performed to ensure paint adhesion properties were acceptable. Then the performance of the new cover and cap was evaluated. The final successful feasibility check involved conducting a trial run in GM assembly plants. The initiative went into effect in August 2001. Reimbursement by the pound for the plastic also benefits Saturn's bottom line.

#### The Pollution Prevented

Reuse of the GTX plastic eliminated nearly 300,000 lbs per year of scrap GTX plastic, and importantly, reduced the amount of new plastic that must be manufactured as a raw material.

TENNESSEE POLLUTION PREVENTION PARTNERSHIP  
1-800-734-3619 [WWW.TDEC.NET/DCA](http://WWW.TDEC.NET/DCA)